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EXAMINER

SHAH, MILAP

ART UNIT PAPER NUMBER

3714

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Please find below and/or attached an Office communication concerning this application or proceeding.

DETAILED ACTION

Priority

Receipt is acknowledged of papers submitted under 35 U.S.C. 119(a)-(d), which papers have been placed of record in the file.

Drawings

The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore the following features must be shown or the feature(s) canceled from the claim(s). Additional support in the drawing is required for at least (1) an automatic ball feeder and (2) the claimed components (the current drawing indicating such components as the radar is unacceptable, see details below). The Examiner requests the Applicant to go over the claimed subject matter and submit new drawings that more clearly convey the applicant's claimed invention. No new matter should be entered.

Additionally, the present drawings are objected to by a Draftsperson at the Office. See attached "Notice of Draftsperson Patent Drawing Review" (PTO-948) form.

Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the

remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 3, & 4 are rejected under 35 U.S.C. 102(b) as being anticipated by Witler et al. (U.S. Patent No. 5,375,832).

Claim 1: Witler et al. disclose the same invention including a ball detection apparatus resident in a golf analyzing apparatus including analyzing the speed of a struck golf ball. Witler et al. disclose a first signal being a signal from a saturation detector in the form of radar, which detects the movement of either the club head or the struck golf ball. Witler et al. also disclose a second signal being a trigger signal such as an acoustic trigger (considered equivalent to a directional microphone as both capture audio from a particular region) for indicating the sound of a struck golf ball. A "monitor means" determines such coincidences in the signals as false triggering (i.e. when an a golf ball at an adjacent tee is struck). See at

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least abstract; figures 1-5 (and related descriptions); column 7, line 60 – column 8, line 39; and column 13, lines 11-51.

Claim 3: Witler et al. disclose the two signals are ANDED (i.e. the Boolean operator used when two signals must both be set as “high” or “true” for the output of the operation to be a signal that is also set “high” or “true”), thus, specific predetermined thresholds (i.e. a predetermined “peak”) must be met before the speed measurement (i.e. where the output signal of AND propagates) can be taken (column 8, lines 16-22).

Claim 4: Witler et al. disclose detecting a coincident between the first and second signal as described above, wherein the second signal must be or is inherently above a predetermined level for the acoustic trigger to have actuated the monitoring or additional determination means.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 2 & 5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Witler et al., as applied to claims 1, 3, & 4, where applicable.

Claim 2: Witler et al. disclose the invention substantially as claimed except explicitly disclosing the microphone or equivalent acoustic trigger of the circuitry is only responsive to a frequency range of 2 kilohertz to 5 kilohertz. However, it is submitted that it would have

been notoriously well known to have adapted this particular range in this particular application since it is notoriously well known that a golf ball being struck with a golf club in the instant area where a microphone would not create a sound wave higher than the high end of this particular range, and furthermore it would have been obvious to maintain the low end at 2 kilohertz simply to prevent false triggers. Applicant is directed to MPEP 2144.05(B)(III) which states "Applicants can rebut a prima facie case of obviousness based on overlapping ranges by showing the criticality of the claimed range. "The law is replete with cases in which the difference between the claimed invention and the prior art is some range or other variable within the claims. . . . In such a situation, the applicant must show that the particular range is critical, generally by showing that the claimed range achieves unexpected results relative to the prior art range." In re Woodruff, 919 F.2d 1575, 16 USPQ2d 1934 (Fed. Cir. 1990)." In the instant application, the claimed range is not considered critical or produces any expected result, therefore, it is maintained that it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Witler et al.'s acoustic trigger to be responsive to a frequency range of 2 kilohertz to 5 kilohertz. Additional support can be found within Witler et al. in which it is disclosed that "the acoustic trigger may be made very sensitive", which suggests the responsiveness of the acoustic trigger is adjustable (column 13, line 13).

Claim 5: As discussed directly above, the acoustic trigger is considered to be adjustable, but Witler lacks a disclosure in adjusting the predetermined level that the sound of the struck ball must surpass in accordance with the amplitude of the first signal. Witler et al., however, does suggest two options of features which when combined provide for varying or adjusting the acoustic trigger in accordance with the amplitude of the club movement. Witler et al disclose

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that there is a wide variety of sounds different kinds of golf balls make when struck by different kinds of golf clubs (cite). Witler et al. also discloses a switch 24 to input which type of golf club is being used. Thus, the Examiner submits that it would have been obvious to one of ordinary skill in the art to adjust the level of the acoustic triggering based on the selected club (which is controls the amplitude of the first signal) for at least the purpose of prevent false triggers since one particular golf club may create a high intensity sound where a different golf club may create a low intensity sound, thus, to prevent false triggers, adjusting the acoustic trigger in view of the selected club (in turn the amplitude of that selected club) appears obvious. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Witler et al. to vary the sensitivity of the acoustic trigger in accordance with the amplitude of the first signal as suggested by Witler et al. in order to prevent false triggering of the golfing apparatus (i.e. false starting of the calculation and processes of the golfing apparatus, which wastes time).

Claims 6-9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Witler et al., as applied to claim 1, in view of Provost (U.S. Patent No. 5,603,664).

Claim 6: Witler et al. disclose the invention substantially as claimed including all the limitations as explained above with respect to claim 1, in detail. Witler et al., however, lack disclosing an automatic golf ball teeing machine in which a ball feeder is operable based on the response or determination by the monitoring means, which either detects or does not detect a coincidence between the first and second signals.

Provost specifically discloses an automatic ball feeder for teeing up a golf tee automatically in response to a detection of a golf ball being on the tee or not (abstract).

Automatic ball feeders are also notoriously well known in the art, thus incorporating the teachings of at least Provost, it would have been obvious to one of ordinary skill in the art to provide the golfing apparatus of Witler et al. with an automatic ball feeder to be in communication with the ball detection system of Witler et al. of which would supply a signal to the automatic ball feeder similar to the signal given to the automatic ball feeder by the ball detector disclosed by Provost (see at least abstract and summary of invention). One would be motivated to add an automatic ball feeder to a golfing apparatus, especially a golfing apparatus that is utilized to help train new players, in order to prevent the player from moving his/her feet, body, or alignment for a next swing, thus aiding in the training of new players (column 3, lines 24-39 of Provost). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Witler et al. with the addition of an automatic ball feeder as taught by Provost in order to provide a golf ball to the tee automatically in response to a ball detection signal showing no ball is on the tee for the purpose of preventing a user who may new and in training from moving his/her feet, body or alignment between swings, thus, increasing the overall effectiveness of the training.

Claim 7: The combination of Witler et al. & Provost discloses the invention substantially as claimed except for the radar device being supported by (i.e. mounted to) the ball feeder.

However, it would have been obvious to one of ordinary skill in the art at the time of the invention to have positioned the radar device of the combination of Witler et al. & Provost in that specific location since it has been held that rearranging parts of an invention only involves routine skill in the art. See *In Re Japikse*, 86 USPQ 70.

Claim 8: The microphone equivalent (figure 5[acoustic trigger 46]) is a piece of the circuitry (figure 5[circuit 30]) that is housed (i.e. supported by) the golfing apparatus of Witler et al. (figure 2[golfing apparatus 20 is the 'control panel']).

Claim 9: The combination of Witler et al. & Provost discloses the invention substantially as claimed except for specifically disclosing a display of the maximum speed of the golf club. Witler et al. disclose measuring club head speed, but do not disclose displaying it on the golfing apparatus or control panel. It is obvious to one of ordinary skill in the art to display stored or measured info for at least statistical purposes or for the curiosity of a player that is interested in seeing how fast they have swung the golf club. Therefore, it would have been an obvious matter of design choice to display what information is already determined within the processing in order to enhance player excitement, at least for the reason that they can see some of their statistical data, including club speed. Therefore, it would have been prima facie obvious to modify the combination of Witler et al. & Provost to obtain the invention as specified in claim 9.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

<u>Name</u>	<u>Reference</u>	<u>Applicability</u>
Malone	U.S. Patent No. 5,269,519	Golfing apparatus interfaced with a game simulation. Measurements and calculations made.
Eckstein	U.S. Patent No. 5,282,629	Automatic ball feeder.
Hutchings et al.	U.S. Patent No. 5,527,036	Golf swing trainer, monitors movement of club head and speed.
Yamamoto	U.S. Patent Application Publication No. 2001/00232909	Ball motion measuring apparatus.
Ahlgren	U.S. Patent No. 6,293,802	Swing analysis in video lessons.
Murakami et al.	JP Patent No. 06-022319	Motion analyzer having monitor means which uses two signals or two components; images from a camera and sound of the ball being hit.
Ohira	JP Patent No 06-311474	Swing analysis apparatus and processing system.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Milap Shah whose telephone number is (571) 272-1723. The examiner can normally be reached on M-F: 9:30AM-6:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Hotaling can be reached on (571) 272-4437. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

M.B.S.



SCOTT JONES
PRIMARY EXAMINER